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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,874	10/26/2000	Yoshiaki Umehara	N45-127803M/MI	2977
7590	03/02/2004		EXAMINER	
McGuire Woods LLP 1750 Tysons Boulevard Suite 1800 McLean, VA 22102			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/695,874	UMEHARA ET AL.
<b>Examiner</b>	<b>Art Unit</b>	
Melody M. Burch	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 23 December 2003.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 6-11, 13-16 and 18-28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 6-11, 13, 14, 16, 18-23 and 25-28 is/are rejected.

7)  Claim(s) 15 and 24 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 06 December 2002 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 19.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Objections***

1. Claims 6-11, 13-16, 18-28 are objected to because of the following informalities:
  - The phrase "the one side of providing said cylinder" first claimed in line 12 of claim 6 should be reworded since "a one side of providing said cylinder" was never recited. A similar issue holds true for the phrase "the other side of molding said reaction pawl" in claim 6 and for the two similar phrases in claims 15 and 19;
  - The phrase "after casting and subjected to a cutting process" in line 5 of claim 8 should be reworded for grammatical purposes. It is unclear whether Applicant intends to recite --after casting and after being subjected to a cutting process—similar wording exists on pg. 8 of the specification of the instant application;
  - Claim 15 fails to include a transitional phrase such as "said caliper body comprising" as recited in claims 6 and 9;
  - Examiner recommends amending the phrase "to be" in line 3 of claims 24 and 25 to recite --to form-- or --to create-- if this modification coincides with Applicant's intentions.

The remaining claims are objected to due to their dependency from one of claims 6, 15, and 19. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3683

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-11, 13, 14, 16, 18-23, and 25-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3683

Re: claim 6. The phrase "said union hole" in line 9 lacks proper antecedent basis in the claim.

Re: claims 9-11. The phrase "said one side" first claimed in line 2 of claim 9 is indefinite. It is unclear to the Examiner whether "said one side" intends to refer to the one side of the disc rotor or the one side of providing the cylinder.

Re: claims 14 and 16. The phrase "a gravity casting method" is indefinite. It is unclear to the Examiner whether the gravity casting method is intended to be the same or different from the casting method claimed in claim 6. Examiner has interpreted the gravity casting method to be the same as the casting method set forth in claim 6. If Examiner's interpretation is correct, Examiner recommends using such language in claim 14 as --wherein said casting method is a gravity casting method--.

Re: claim 19. The recitation of a sprue in line 7 of claim 19 and a union hole in claim 9 of claim 19 as separate elements leads to confusion. Examiner notes that in lines 24-25 of pg. 6 of the specification, Applicant describes the union hole as being "used as a sprue" which essentially suggests that the union hole and the sprue represent the same element.

Re: claim 21. The phrase "a thick-walled portion" in line 2 is indefinite. It is unclear to the Examiner whether the thick-walled portion is intended to be the same or different from the "thick-walled connection" claimed in claim 6.

Re: claims 23 and 25. The phrase "a cavity" first claimed in line 2 of claim 23 is indefinite. It is unclear to the Examiner whether the cavity in claims 23 and 25 are intended to be the same or different from those claimed in claims 6 and 19, respectively.

If the cavity in claims 23 and 25 is intended to be the same as that in claims 6 and 19, Examiner recommends using --said (or the) cavity--.

Re: claims 26 and 27. The phrase "wherein sprue" in line 2 is indefinite. It is unclear to the Examiner whether the sprue in claims 26 and 27 is intended to be the same or different from that claimed in claims 6 and 15, respectively.

Re: claim 28. The phrases "the reaction portion" and "the central portion" in lines 2 and 3, respectively, lack proper antecedent basis.

The remaining claims are indefinite due to their dependency from one of claims 6 and 19.

#### ***Allowable Subject Matter***

4. Claims 6-11, 13-16, 18-28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and or the objection(s) set forth in this Office action. See response to arguments below.

#### ***Response to Arguments***

5. Applicant's arguments, see pgs. 9 and 11, filed 12/2/03, with respect to the claims have been fully considered and are persuasive. The 103 rejections of the claims have been withdrawn.

Applicant argues that JP '530 does not show that a flange portion of the union hole is formed by processing the sprue after the casting. Examiner notes, however, that such an argument is more specific than the claim recitations set forth in claims 6, 15, and 19.

Claim 6, for example, merely recites "a sprue which is formed at the bottom portion of the cylinder of the caliper body for molding the caliper body with a base material". Since in lines 24-25 of pg. 6 of the instant application, Applicant describes the union hole 24 as being used as a sprue, Examiner maintains that the union hole shown surrounding element 5 of JP'530 is (or is used as) a sprue to the same extent as Applicant's.

Although JP '530 shows a sprue, Examiner agrees that the reference alone or as modified does not disclose the specific ratio of volumes of the central chamber to the reaction chamber and the central chamber to the action chamber. JP'718 teaches the use of variations in volume ratios to avoid sink marks, but does not teach that the volume ratios specifically include that of the central chamber to the reaction chamber as well as that of the central chamber to the action chamber. The JP'718 reference also does not teach the specific numerical values of the volume ratios and appears to be directed to molding of resin material while the material of the caliper body of JP'530 is light metal basic composite material as disclosed in the English abstract of the JP '530 reference. Support for the significance of the specific volume ratios is provided in the specification of the instant application on pg. 4-5.

Examiner maintains that Applicant submit a prior art date and any other known pertinent information for the conventional GDC caliper shown in the exhibit attached with the interview summary of 1/15/04 so that the information can properly be added to the prior art of record on a PTO-892 form.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 27, 2004

Melody M. Burch 2/27/04